

LISTING OF CLAIMS:

1. (Canceled)

2. (Canceled)

3. (Currently amended): A voltage supplying device comprising:

a first relaying line (LV₁);

a second relaying line (LV_n);

an additional relaying line (LV_{n+1});

a first voltage line group (GS1) having a first voltage line (LS1 in GS1) supplied with a voltage through said first relaying line[[:]], and a second voltage line (LS_n in GS1) supplied with a voltage through said second relaying line;

a second voltage line group (GS2) having a third voltage line (LS1 in GS2) adjacent to said second voltage line and supplied with a voltage through said first relaying line, and a fourth voltage line (LS_n in GS2) supplied with a voltage through said additional relaying line;

a third voltage line group (GS3) having a fifth voltage line (LS1 in GS3) adjacent to said fourth voltage line and supplied with a voltage through said first relaying line ~~said third voltage line adjacent to said second voltage line~~; and

a controlling means for continuing to supply said second voltage line with a voltage through said second relaying line during a transition from a first voltage supplying state in which said first voltage line is supplied with a voltage to a second voltage supplying state in which said third voltage line is supplied with a voltage, and said fourth relaying line with a voltage through said additional relaying line during a transition from a state in which said third voltage line is

supplied with a voltage through said first relaying line to a state in which said fifth voltage line is supplied with a voltage through said first relaying line.

4. (Original): A voltage supplying device as claimed in claim 3,
wherein said controlling means supplies said first relaying line with a voltage for said third voltage line after supplying said first relaying line with a voltage for said first voltage line,
and wherein said controlling means continues to supply said second relaying line with a voltage for said second voltage line during a transition from a state in which said first relaying line is supplied with said voltage for said first voltage line to a state in which said first relaying line is supplied with said voltage for said third voltage line.

5. (Original): A voltage supplying device as claimed in claim 4,
wherein said controlling means is adapted to switch from a disconnection state in which said third voltage line is disconnected from said first relaying line to a connection state in which said third voltage line is connected to said first relaying line,
and wherein said controlling means continues to supply said second voltage line with said voltage for said second voltage line through said second relaying line during a transition from a disconnection state in which said third voltage line is disconnected from said first relaying line to a connection state in which said third voltage line is connected to said first relaying line.

6. (Original): A voltage supplying device as claimed in claim 5,

wherein said controlling means is further adapted to switch from a disconnection state in which said second voltage line is disconnected from said second relaying line to a connection state in which said second voltage line is connected to said second relaying line,

and wherein said controlling means continues to keep a connection state in which said second voltage line is connected to said second relaying line during a transition from a disconnection state in which said third voltage line is disconnected from said first relaying line to a connection state in which said third voltage line is connected to said first relaying line.

7. (Original): A voltage supplying device as claimed in claim 6,

wherein said controlling means comprises:

a first switching means for making a connection state in which said first voltage line is connected to said first relaying line and a disconnection state in which said first voltage line is disconnected from said first relaying line;

a second switching means for making a connection state in which said second voltage line is connected to said second relaying line and a disconnection state in which said second voltage line is disconnected from said second relaying line; and

a third switching means for making a connection state in which said third voltage line is connected to said first relaying line and a disconnection state in which said third voltage line is disconnected from said first relaying line,

and wherein said controlling means comprises a switch controlling means for controlling said first, second, and third switching means in such a way that a connection state in which said second voltage line is connected to said second relaying line is kept during a transition from a first state in which said first voltage line is connected to said first relaying line and said third

voltage line is disconnected from said first relaying line to a second state in which said first voltage line is disconnected from said first relaying line and said third voltage line is connected to said first relaying line.

8. (Original): A voltage supplying device as claimed in claim 7,

wherein said first switching means connects said first voltage line to said first relaying line in its on state and disconnects said first voltage line from said first relaying line in its off state,

wherein said second switching means connects said second voltage line to said second relaying line in its on state and disconnects said second voltage line from said second relaying line in its off state,

wherein said third switching means connects said third voltage line to said first relaying line in its on state and disconnects said third voltage line from said first relaying line in its off state,

and wherein said switch controlling means controls said first, second, and third switching means in such a way that said second switching means keeps on state during a transition of said first switching means from on state to off state and a transition of said third switching means from off state to on state.

9. (Original): A voltage supplying device as claimed in claim 8,

wherein said switch controlling means outputs a first control signal for controlling said first switching means, a second control signal for controlling said second switching means, and a third control signal for controlling said third switching means,

wherein said first control signal has a first on-voltage for turning said first switching means to an on-state and a first off-voltage for turning said first switching means to an off-state,

wherein said second control signal has a second on-voltage for turning said second switching means to an on-state and a second off-voltage for turning said second switching means to an off-state,

wherein said third control signal has a third on-voltage for turning said third switching means to an on-state and a third off-voltage for turning said third switching means to an off-state,

wherein said switch controlling means outputs said first and third control signals in such a way that a transition of said third control signal from said third off-voltage to said third on-voltage is made when a transition of said first control signal from said first on-voltage to said first off-voltage is made,

and wherein said switch controlling means outputs said second control signals in such a way that said second control signal has said second on-voltage during a transition of said third control signal from said third off-voltage to said third on-voltage.

10. (Original): A voltage supplying device as claimed in claim 9,

wherein said switch controlling means comprises an OR circuit for implementing the logic sum of said first control signal and said third control signal to output a signal representing said logic sum of said first and second control signals as said second control signal.

11. (Original): A voltage supplying device as claimed in claim 9, wherein said switch controlling means comprises an delay circuit for delaying said first control signal to output said delayed first control signal as said second control signal.

12. (Canceled)

13. (Canceled)

14. (Previously presented): A voltage supplying device as claimed in claim 3, wherein said controlling means blocks the supply of the voltage to said second voltage line after said transition from said first voltage supplying state to said second voltage supplying state.

15. (Currently amended): A voltage supplying device comprising:
a first relaying line (LV₁);
a second relaying line (LV_n);
an additional relaying line (LV_{n+1});
a first voltage line group (GS1) having a first voltage line (LS1 in GS1) supplied with a voltage through said first relaying line[[:]], and a second voltage line (LS_n in GS1) supplied with a voltage through said second relaying line;
a second voltage line group (GS2) having a third voltage line (LS1 in GS2) adjacent to said second voltage line and supplied with a voltage through said first relaying line, and a fourth voltage line (LS_n in GS2) supplied with a voltage through said additional relaying line;

a third voltage line group (GS3) having a fifth voltage line (LS1 in GS3) adjacent to said fourth voltage line and supplied with a voltage through said first relaying line said third voltage line adjacent to said second voltage line; and

a controlling means for switching from a first voltage supplying state in which said first voltage line is supplied with a voltage to a second voltage supplying state in which said third voltage line is supplied with a voltage during supply of a voltage through said second relaying line to said second voltage line, and switching from a state in which said third voltage line is supplied with a voltage through said first relaying line to a state in which said fifth voltage line is supplied with a voltage through said first relaying line during supply of a voltage through said additional relaying line to the fourth relaying line.

16. (Currently amended): A voltage supplying device comprising:

a first relaying line (LV1);

a second relaying line (LV_n);

an additional relaying line (LV_{n+1});

a first voltage line group (GS1) having a first voltage line (LS1 in GS1) supplied with a voltage through said first relaying line[;], and a second voltage line (LS_n in GS1) supplied with a voltage through said second relaying line;

a second voltage line group (GS2) having a third voltage line (LS1 in GS2) adjacent to said second voltage line and supplied with a voltage through said first relaying line, and a fourth voltage line (LS_n in GS2) supplied with a voltage through said additional relaying line;

a third voltage line group (GS3) having a fifth voltage line (LS1 in GS3) adjacent to said fourth voltage line and supplied with a voltage through said first relaying line said third voltage line adjacent to said second voltage line; and

a controlling continuing to supply said second voltage line with a voltage through said second relaying line during a transition from a first voltage supplying state in which said first voltage line is supplied with a voltage to a second voltage supplying state in which said third voltage line is supplied with a voltage, and said fourth relaying line with a voltage through said additional relaying line during a transition from a state in which said third voltage line is supplied with a voltage through said first relaying line to a state in which said fifth voltage line is supplied with a voltage through said first relaying line.

17. (Previously presented): A voltage supplying device as claimed in claim 16,
wherein said controller supplies said first relaying line with a voltage for said third voltage line after supplying said first relaying line with a voltage for said first voltage line,
and wherein said controller continues to supply said second relaying line with a voltage for said second voltage line during a transition from a state in which said first relaying line is supplied with said voltage for said first voltage line to a state in which said first relaying line is supplied with said voltage for said third voltage line.

18. (Previously presented): A voltage supplying device as claimed in claim 17,
wherein said controller is adapted to switch from a disconnection state in which said third voltage line is disconnected from said first relaying line to a connection state in which said third voltage line is connected to said first relaying line,
and wherein said controller continues to supply said second voltage line with said voltage for said second voltage line through said second relaying line during a transition from a

disconnection state in which said third voltage line is disconnected from said first relaying line to a connection state in which said third voltage line is connected to said first relaying line.

19. (Previously presented): A voltage supplying device as claimed in claim 18,
wherein said controller is further adapted to switch from a disconnection state in which said second voltage line is disconnected from said second relaying line to a connection state in which said second voltage line is connected to said second relaying line,
and wherein said controller continues to keep a connection state in which said second voltage line is connected to said second relaying line during a transition from a disconnection state in which said third voltage line is disconnected from said first relaying line to a connection state in which said third voltage line is connected to said first relaying line.

20. (Previously presented): A voltage supplying device as claimed in claim 19,
wherein said controller comprises:
a first switch making a connection state in which said first voltage line is connected to said first relaying line and a disconnection state in which said first voltage line is disconnected from said first relaying line;
a second switch making a connection state in which said second voltage line is connected to said second relaying line and a disconnection state in which said second voltage line is disconnected from said second relaying line; and
a third switch making a connection state in which said third voltage line is connected to said first relaying line and a disconnection state in which said third voltage line is disconnected from said first relaying line,

and wherein said controller comprises a switch controller controlling said first, second, and third switches in such a way that a connection state in which said second voltage line is connected to said second relaying line is kept during a transition from a first state in which said first voltage line is connected to said first relaying line and said third voltage line is disconnected from said first relaying line to a second state in which said first voltage line is disconnected from said first relaying line and said third voltage line is connected to said first relaying line.

21. (Previously presented): A voltage supplying device as claimed in claim 20, wherein said first switch connects said first voltage line to said first relaying line in its on state and disconnects said first voltage line from said first relaying line in its off state, wherein said second switch connects said second voltage line to said second relaying line in its on state and disconnects said second voltage line from said second relaying line in its off state, wherein said third switch connects said third voltage line to said first relaying line in its on state and disconnects said third voltage line from said first relaying line in its off state, and wherein said switch controller controls said first, second, and third switch in such a way that said second switch keeps on state during a transition of said first switch from on state to off state and a transition of said third switch from off state to on state.

22. (Previously presented): A voltage supplying device as claimed in claim 21, wherein said switch controller outputs a first control signal for controlling said first switch, a second control signal for controlling said second switch, and a third control signal for controlling said third switch,

wherein said first control signal has an first on-voltage for turning said first switch to an on-state and an first off-voltage for turning said first switch to an off-state,

wherein said second control signal has an second on-voltage for turning said second switch to an on-state and an second off-voltage for turning said second switch to an off-state,

wherein said third control signal has an third on-voltage for turning said third switch to an on-state and an third off-voltage for turning said third switch to an off-state,

wherein said switch controller outputs said first and third control signals in such a way that a transition of said third control signal from said third off-voltage to said third on-voltage is made when a transition of said first control signal from said first on-voltage to said first off-voltage is made,

and wherein said switch controller outputs said second control signals in such a way that said second control signal has said second on-voltage during a transition of said third control signal from said third off-voltage to said third on-voltage.